

Fig 1 (Pr. w A1+)

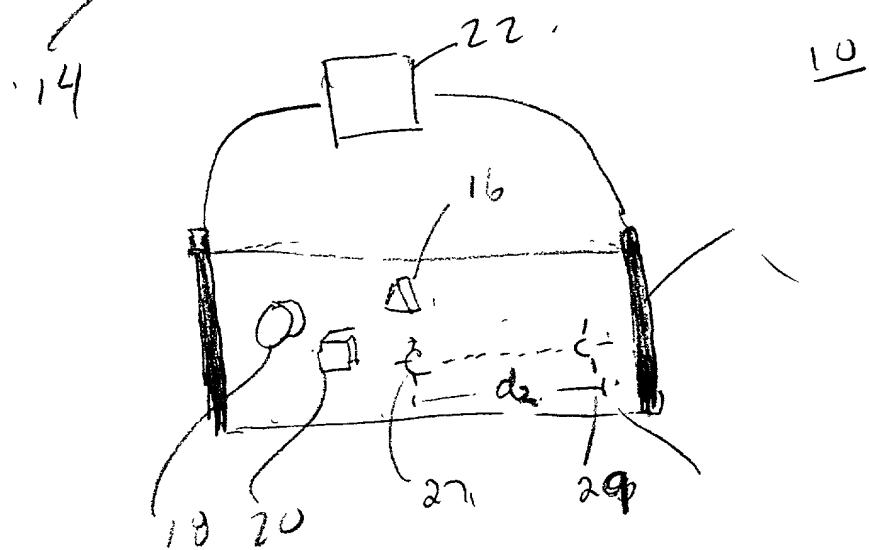


Fig 2 (Prior Art)

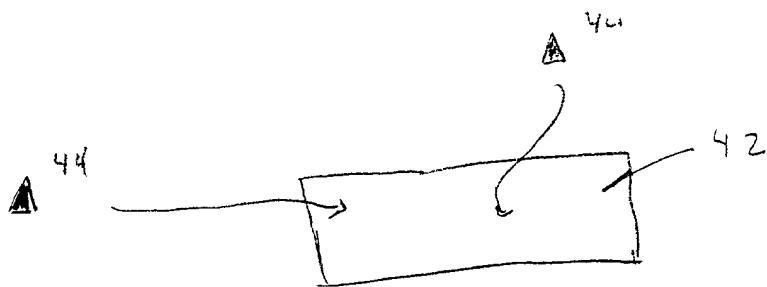


Fig 3A (prior art)

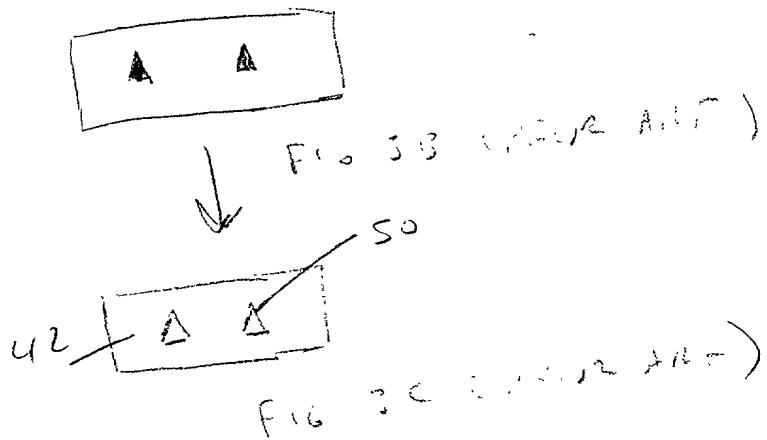
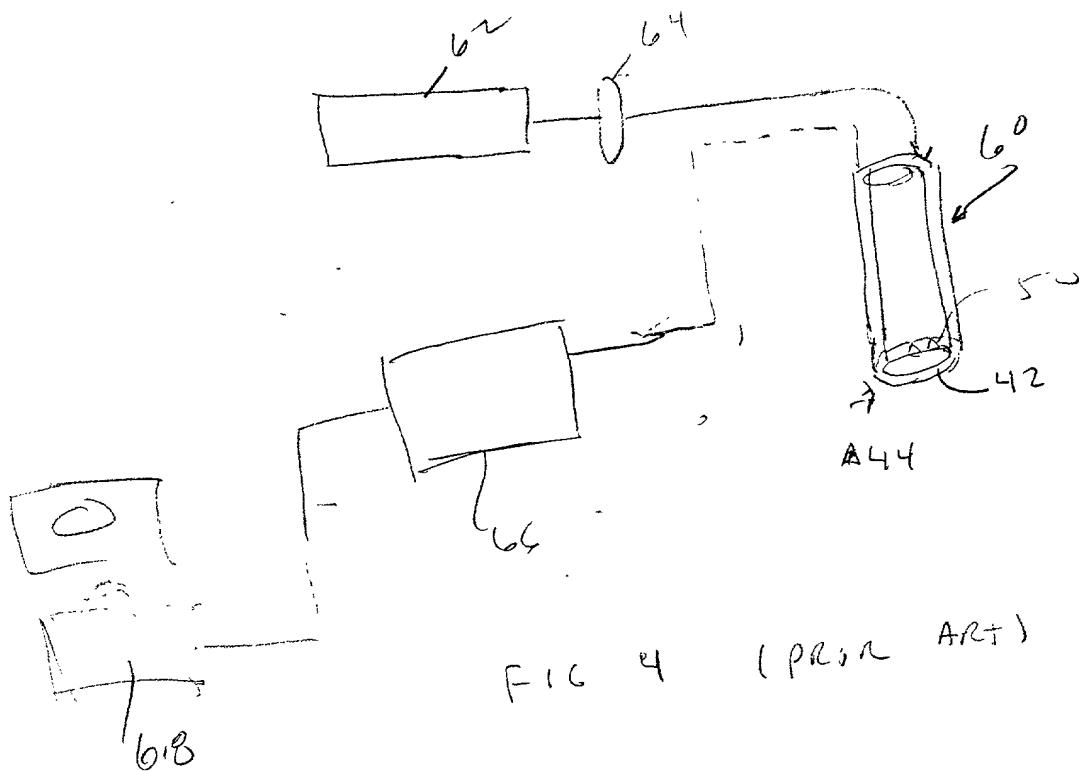
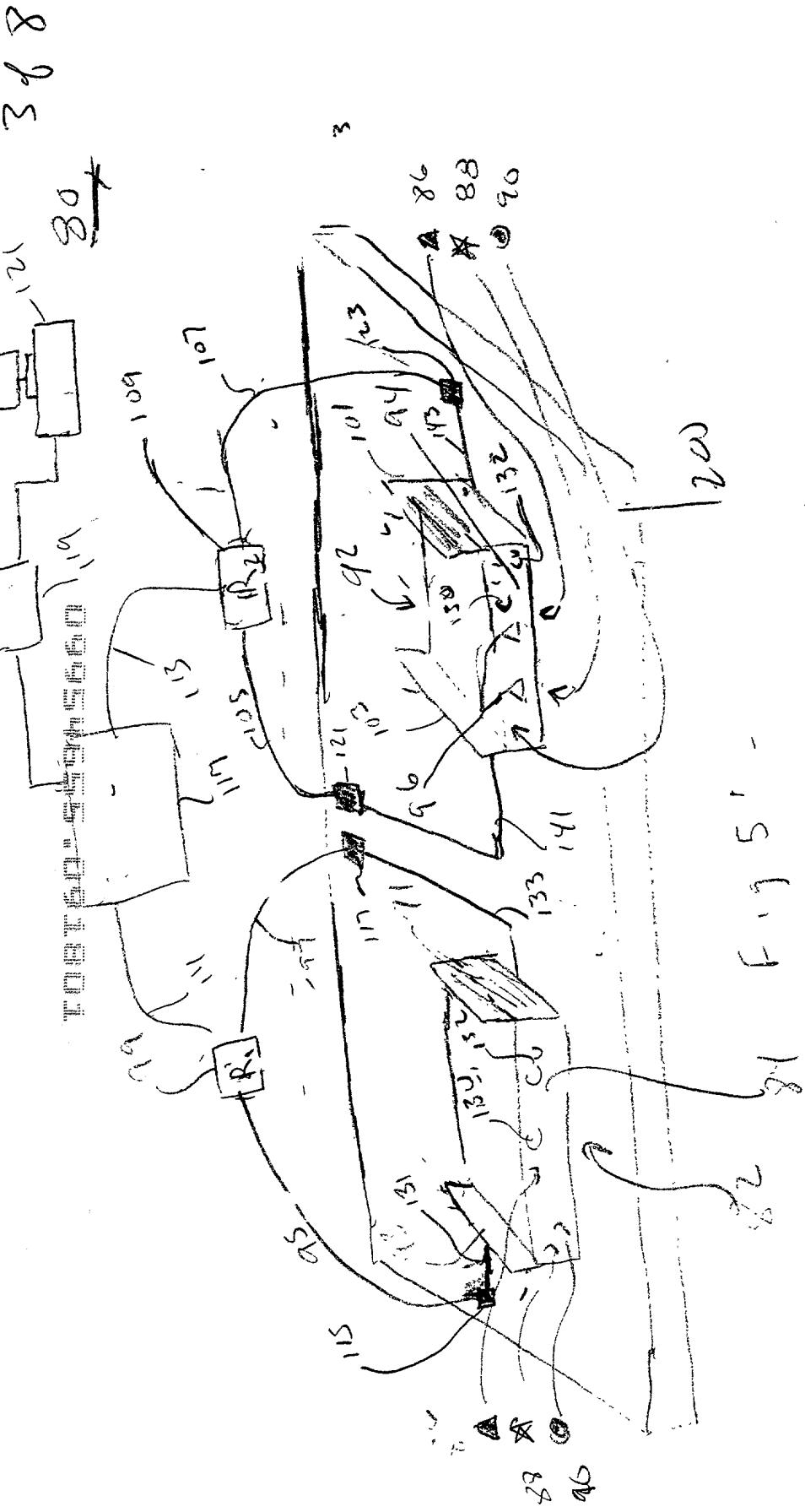


Fig 3C (prior art)





Flowchart for Molecular Recognition Paired Sensors Fabrication

Fig 6, ,

Conductor/Polymer/Solvent mixture
(CPS) (e.g., carbon)

No Analyte \rightarrow Add Analyte

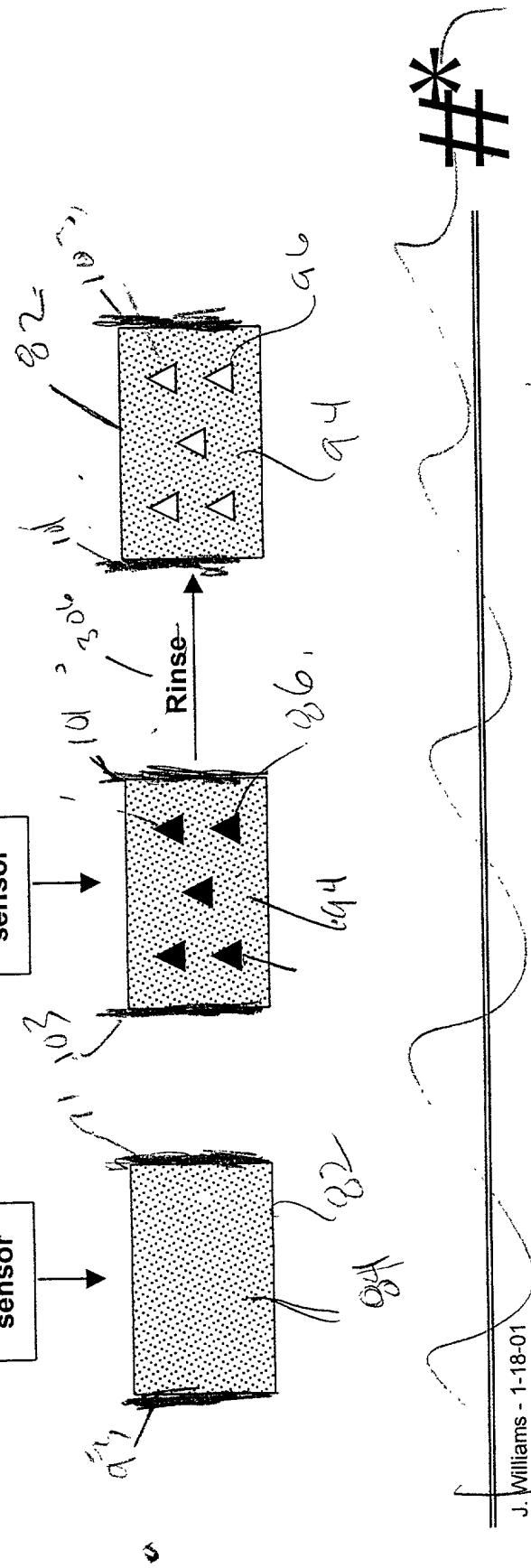
CPS⁺
Analyte

Apply to
sensor

CPS
Analyte

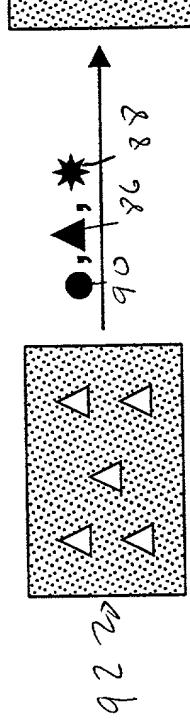
Apply to
sensor

Where  = conductor, such as carbon
 = holes, in same shape as analyte

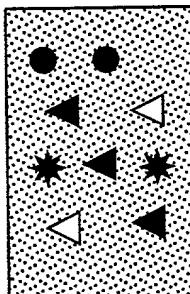


Resistive Detection Exposure of Molecular Recognition Paired Sensors

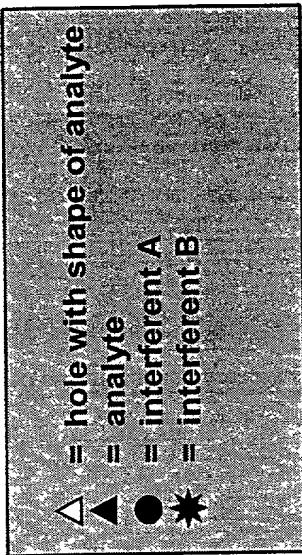
1) Add mixture (gas or liquid) containing analyte plus interferents to resistance detector



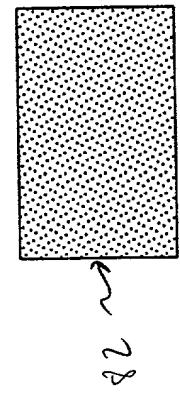
Resistance = R1



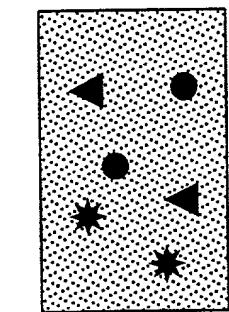
Resistance = R2



Resistance = R3



Resistance = R4



2) Measure R1, R2, R3, R4. At low concentrations of analyte of interest Δ analyte is absorbed into cavities and does not contribute to resistance. Resistance only increases if there are no cavities, and this absorbed chemical leads to resistance increase. See sheet of equations.

3) Calculate $R\Delta$ resistance change due to analyte of interest from R1, R2, R3, R4

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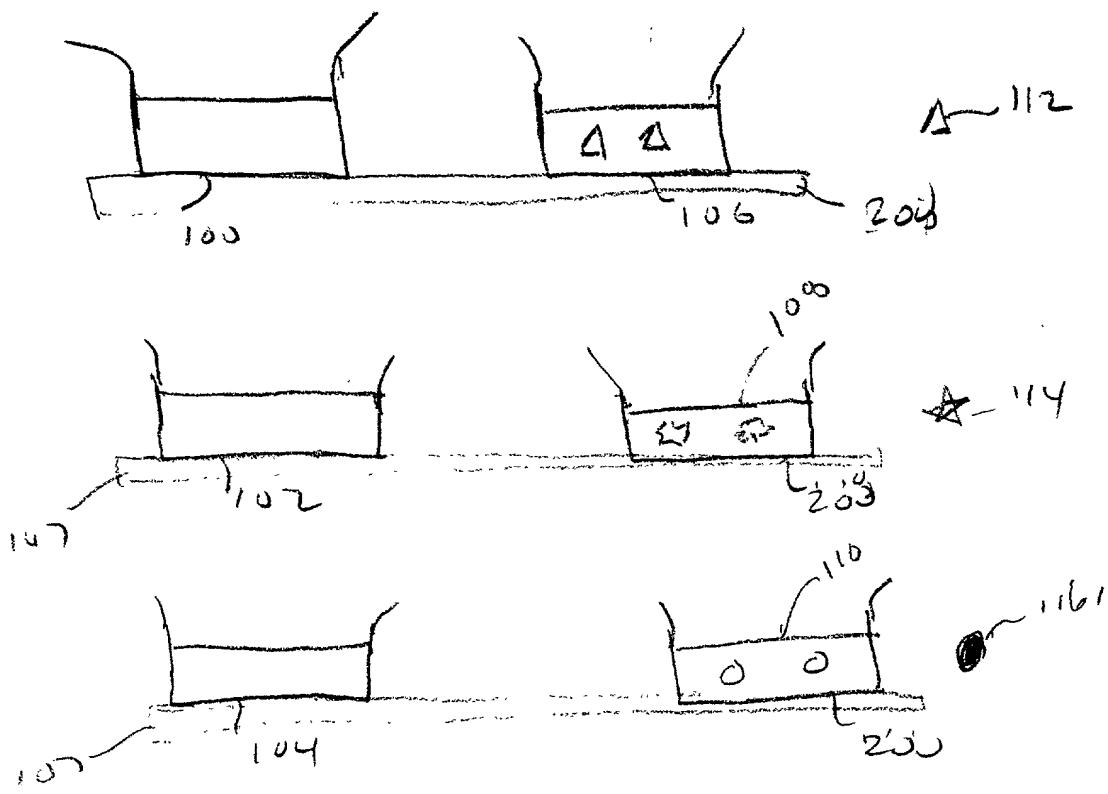
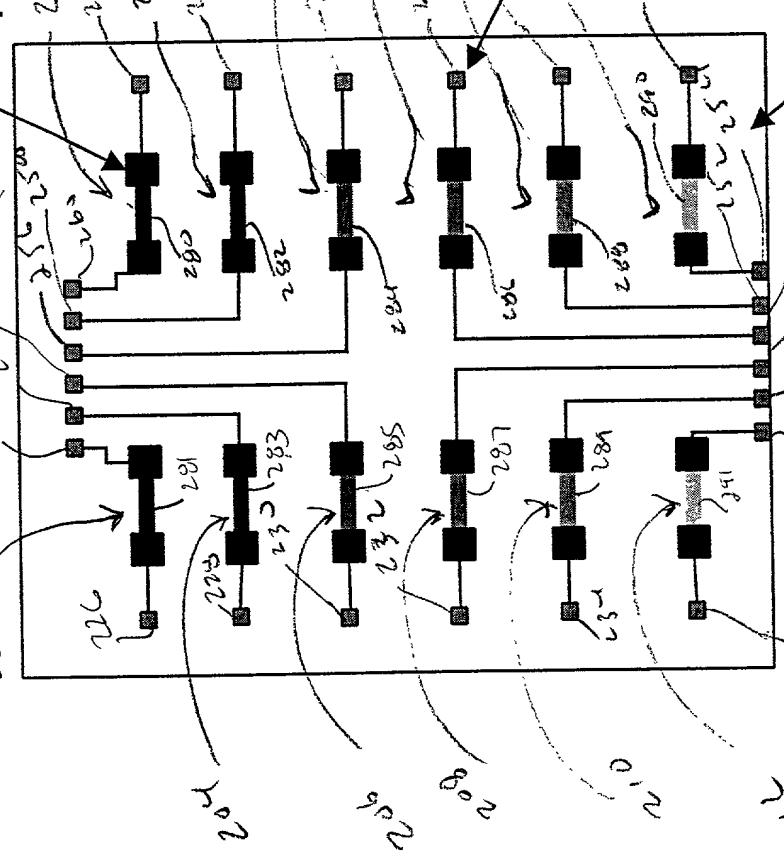


Fig. 80

~~Resistive Network for Exposure of Molecular Recognition Sensors~~

Metal contact pads for electrical contact to polymer



Array of resistive sensors consisting of polymer with range of cavities from none (top) to high (5%) concentration (bottom) for two different analytes

Contacts for electrical leads from resistors for connection to test equipment

Ceramic substrate

Fig. 2

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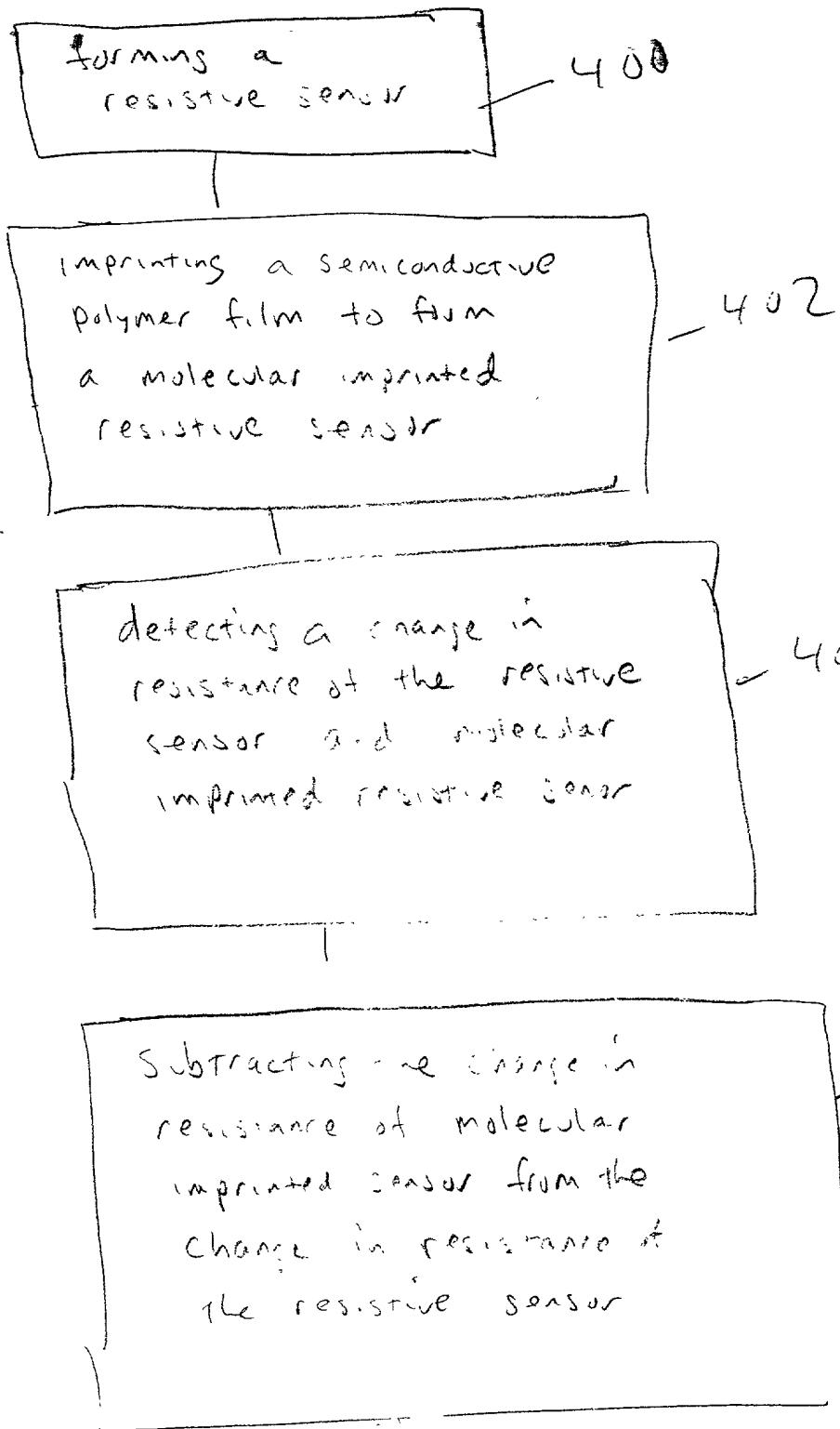


Fig 10